

Application No.: 10/776,619  
Amendment dated: October 20, 2006  
Reply to Office Action dated: July 27, 2006

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REMARKS/ARGUMENTS

Claims 7-9 and 17-19 are pending in this application. Claims 1-6 and 10-16 were previously cancelled. Claims 20-33 have been added. It is respectfully submitted that no new matter has been added. Reconsideration in view of the new claims and following remarks is respectfully requested.

Claim Rejections under 35 U.S.C § 103

Claims 7-9 and 17-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 4,253,768 to Yaroshuk et al., (hereinafter "Yaroshuk").

Applicant respectfully traverses the rejections to claims 7-9 and 17-19. In order for a claim to be rejected for obviousness under §103, the prior art must teach or suggest each element of the claim and suggest combining the elements in the manner contemplated by the claim. *See Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 934 (Fed. Cir. 1990), cert. denied 111 S.Ct. 296 (1990); In re Bond, 910 F.2d 831, 834 (Fed. Cir.1990).

Yaroshuk discloses a system for automatically classifying defects both for sorting defective products (metallic surfaces, especially tube surfaces) as to the reworking operation required for correcting the defect, and for classifying the defect as to the preceding manufacturing operation which is the most probable cause of that defect and sending a signal to that operation to provide for adjustments to minimize future defects. (*See Abstract*).

Applicant agrees with the Office Action that Yaroshuk fails to disclose *when the comparison identifies an instance of product performance that fails a benchmark, determining whether the instance relates to a product defect previously undetected in the product line.* as

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recited in independent claims 7 and 17. The Office Action, however, notes that, in light of Yaroshuk, it would have been obvious to one of ordinary skill in the art to determine whether an instance of product performance failing a benchmark relates to a previously undetected defect. Applicant respectfully disagrees.

Yaroshuk is not directed to and does not teach or suggest determination of a previously undetected defect upon identification of product performance failing a benchmark. Yaroshuk instead concerns automated detection and classification of *known* defects associated with metallic surfaces, the repair of such defects, and prevention of similar future defects through the adjustment of the responsible manufacturing operation. (*See Abstract*). Yaroshuk uses a laser to scan the surface of a tube and capture reflected light by means of sensors (*see Yaroshuk*, Col. 3, lines 25-31). The reflected light is then analyzed and compared to threshold values stored in comparators, with any deviations from the threshold values indicating possible defects (*see Yaroshuk*, Col. 4, lines 52-58). Yaroshuk further states:

The logic circuitry not only indicates rejects, but also classifies the defects. This allows for sorting the tubes for subsequent analysis and repair, and also for signalling the appropriate preceding work stations such that process alterations may be made which will minimize the number of defects. It has been found convenient to classify the defects as "pits," "dents," "stains," or "scratches." (*Yaroshuk*, Col. 5, lines 3-10).

Thus, any defects detected by the system of Yaroshuk are readily grouped into existing categories (e.g. in one embodiment, pits, dents, stains, or scratches) for repair and product line alterations. Yaroshuk does not teach or suggest whether the identified defect may or may not be a previously undetected defect. Moreover, one of ordinary skill in the art would not be motivated by Yaroshuk to determine whether an instance of product performance that fails a

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benchmark is related to a previously undetected defect because Yaroshuk is concerned with automating the previously slow and tedious process of manual identification of known tube defects. Yaroshuk states:

Before the development of this technique, tubing inspection on nuclear reactor steam generator tubing and the Zircaloy nuclear reactor fuel rods was performed and analyzed manually. Such visual flaw/defect inspection tasks are dependent on human operation and interpretation. This method lacks a definitive and accurate reference, lacks consistency, is slow and tedious, and adds significantly to product cost. (Yaroshuk, Col. 1, lines 28-35).

In other words, the nature of the problem Yaroshuk is interested in solving is increasing the efficiency and the speed in which known tube defects are detected and classified. Given the nature of this problem, Yaroshuk does not teach, suggest, or disclose the desirability of modifying Yaroshuk's system to discover previously undetected defects. Modifying Yaroshuk's system to discover previously undetected defects runs counter to its stated purpose of increasing efficiency and speed in detecting and classifying known defects. "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." MPEP § 2143.01, *citing In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). Because Yaroshuk does not teach or suggest determination of previously undetected defects upon an instance of a product performance failing a benchmark, and given the nature of the problem Yaroshuk attempts to solve, it would not be obvious to one of ordinary skill in the art to modify Yaroshuk to supply the undisclosed limitation.

Accordingly, since each and every limitation of independent claims 7 and 17 are not taught or suggested by Yaroshuk and no desirability to modify the system of Yaroshuk is shown

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in the prior art, independent claims 7 and 17 are in condition for allowance and the rejection under 35 U.S.C. § 103(a) should be withdrawn. Claims 8-9 and 18-19 depend from allowable independent claims 7 and 17, and therefore are allowable as well.

**Claims 26-33 Define Over the Cited Art**

New independent claims 26 and 30 recite:

at an enterprise computer system, responsive to receipt of performance data relating to a product manufactured by an operator of the enterprise computer system, comparing the received performance data to previously-stored performance data relating to other products of a same product line; ...

if the performance data relates to the previously-stored product defect, *performing product diffusion modeling to determine an extent of propagation of the previously-stored product defect through a product distribution chain*; and ...

The cited prior art fails to teach at least this limitation. Yaroshuk does not disclose the use of product diffusion modeling to determine an extent of propagation of a previously-stored product defect through a product distribution chain. Rather, Yaroshuk is directed to scanning individual metal tubes to detect a defect on the individual tube itself. (see Col. 2, lines 13-30 and lines 50-60). Upon detection of a defect, the system of Yaroshuk classifies the defect and makes changes to the preceding manufacturing steps to minimize future occurrences of the defect. (see Col. 2, lines 54-60). Yaroshuk does not perform any product diffusion modeling to determine if other products in the product distribution chain suffer from the same defect. These claims thus clearly define over the cited prior art.

**Request for Allowance**

It is believed that this Amendment places the application in condition for allowance, and early favorable consideration of this Amendment is earnestly solicited.

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If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the telephone number listed below.

The Office is hereby authorized to charge any fees, or credit any overpayments, to Deposit Account No. 11-0600.

Respectfully submitted,

KENYON & KENYON LLP

Dated: October 20, 2006

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